

AMENDMENTS TO THE CLAIMS

Listing Of Claims

Claims 1-20 (Canceled)

21. (currently amended) A method for testing a semiconductor component having a plurality of terminal contacts comprising:

providing a board comprising a plurality of contacts in electrical communication with test circuitry;

providing a substrate on the board;

providing a plurality of movable test contactors on the substrate comprising first contacts including first conductive polymer layers configured to electrically engage the terminal contacts and second contacts including second conductive polymer layers in electrical communication with the first contacts ~~and~~ configured to electrically engage the contacts, each first contact and each second contact comprising a separate flexible segment of the substrate having a first conductive polymer layer and a second conductive polymer layer on opposing sides thereof;

placing the component on the substrate with the test contactors moving independently to place the terminal contacts in electrical communication with the first contacts and the second contacts in electrical communication with the contacts; and

applying test signals through the test contactors and the terminal contacts to the component.

22. (currently amended) The method of claim 21 wherein the substrate comprises a plurality of grooves separating the contactors and forming a plurality of separate flexible segments of the substrate.
~~for the contactors.~~

23. (previously presented) The method of claim 21 further comprising applying a force to the component during the placing step.

24. (previously presented) The method of claim 21 wherein the substrate is configured to float on the board.

25. (previously presented) The method of claim 21 wherein the terminal contacts comprise an element selected from the group consisting of leads, bumps and pads.

26. (previously presented) The method of claim 21 wherein the placing step is performed using a test handler.

27. (currently amended) A method for testing a semiconductor component having a plurality of terminal contacts comprising:

providing a board comprising a plurality of at least one contact s in electrical communication with test circuitry;

providing a substrate on the board comprising ~~at least one~~ a plurality of contactors configured to simultaneously electrically engage the contacts and the terminal contacts, ~~the~~ each contactor comprising a separate flexible segment of the substrate, a first conductive polymer layer on a first side of the ~~substrate~~ flexible segment configured to electrically engage ~~the~~ a terminal contact, and a second conductive polymer layer on a second opposing side of the ~~substrate~~ flexible segment in electrical communication with the first conductive polymer layer configured to electrically engage ~~the~~ a contact;

placing the component on the board with the ~~first conductive polymer layer~~ contactors moving independently into electrical communication with the terminal contacts

~~and the second conductive polymer layer in electrical communication with the contacts; and~~

applying test signals through the terminal contacts,
~~the contacts, the second conductive polymer layer, and the~~
~~first conductive polymer layer~~ and the contactors to the
component.

28. (currently amended) The method of claim 27
wherein the substrate is configured to float in a Z-
direction on the board.

[,]

29. (currently amended) The method of claim 27
~~wherein the substrate comprises~~ further comprising a
plurality of grooves on the substrate ~~either side of the~~
~~contactor~~ electrically isolating the contactor s and forming
a plurality of flexible segments.
~~on the substrate for the contactor.~~

30. (currently amended) The method of claim 27
wherein ~~the~~ each terminal contact comprises an element
selected from the group consisting of leads, bumps and
pads.

31. (previously presented) The method of claim 27
wherein the component comprises an element selected from
the group consisting of packages, BGA devices and modules.

32. (currently amended) A method for testing a
semiconductor component having a plurality of terminal
contacts comprising:

providing a board comprising a plurality of contacts
in electrical communication with test circuitry;

providing a floating substrate on the board;

providing a plurality of test contactors on the
substrate configured for independent movement, each test

contactor comprising a flexible segment ~~on~~ of the substrate, a first conductive polymer layer on a first side of the flexible segment configured to electrically engage a terminal contact, and a second conductive polymer layer on a second opposing side of the flexible segment in electrical communication with the first conductive polymer layer and configured to electrically engage a contact on the board;

placing the component on the substrate ~~with the terminal contacts in electrical communication with the test contactors moving independently of one another to electrically engage the terminal contacts and the contacts;~~
and

applying test signals through the test contactors and the terminal contacts to the component.

33. (previously presented) The method of claim 32 wherein the test contactors comprise an element selected from the group consisting of gold and platinum.

34. (previously presented) The method of claim 32 wherein the first conductive polymer layer and the second conductive polymer layer comprise an elastomeric base material and a plurality of conductive particles in the base material.

35. (currently amended) The method of claim 32 wherein the substrate includes a plurality of grooves forming a plurality of flexible segments.
~~flexible segments allow the test contactors to move independently to accommodate dimensional variations in the terminal contacts.~~

36. (previously presented) The method of claim 32 wherein the terminal contacts comprise leads and the first

conductive polymer layer comprises a plurality of conductive particles configured to penetrate a lead.

37. (previously presented) The method of claim 32 wherein the terminal contacts comprises bumps and the first conductive polymer layer comprises an indentation for engaging a bump.

38. (previously presented) The method of claim 32 wherein the terminal contacts comprise pads and the first conductive polymer layer comprises a bump for engaging a pad.

39. (previously presented) The method of claim 32 wherein the placing step is performed using a test handler.

40. (previously presented) The method of claim 32 wherein the substrate comprises an opening and the board comprises a pin for physically engaging the opening.

Claims 41-77 (Canceled)